Towards A Sustainable Macroeconomic Policy:

A Primer on the Federal Deficit, Debt, and the Agricultural Economy

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Executive Summary

Excessive public and private debt lays strong claim to being the nation's foremost economic problem. This report answers key questions regarding fiscal policy:

1. How large is the federal budget deficit and debt?
2. How do budget deficits and debt affect the economy?
3. What is the impact of the federal deficit and debt on agriculture?
4. What are the limits to federal debt?
5. What must be done to restore fiscal responsibility?

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Size of the Deficit

A federal deficit of over $300 billion is expected in fiscal 1993. The extent of the federal government's attempt to live beyond its means may be more fully measured by additions to federal debt. By this measure, fiscal shortfalls have averaged 35% higher than indicated by the federal deficit. If debt continues to accumulate at the 1980-92 rate (it cannot), interest on debt would consume the entire gross domestic product in 41 years. A financial crisis characterized by a run on the dollar will come much sooner if current fiscal policies are not changed. Debt buildup could cause technical bankruptcy apparent when attempts to reduce the deficit would slow the economy and actually increase the deficit.

As of this writing the success of the Clinton Administration and Congress in

restoring fiscal discipline was not at all clear. Continuation of 1980-92 policies for another four years could make a return to fiscal responsibility traumatic indeed. On the other hand, return to a balanced federal budget in one year also would massively assault the economy. To reduce shock, the adjustment to fiscal responsibility needs to be spread over a 5-10 year period.

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Impact on the Economy

Interest on the debt is fast becoming the largest item in the federal budget and soon will exceed the federal deficit, implying that the current generation of government service beneficiaries (except creditors) are not benefitting from deficits. Taxpayers will be paying out more than the government's beneficiaries (except creditors) will receive in goods and services. Federal deficits redistribute income to the current generation from future generations, cause economic instability and dislocation of people and businesses, retard economic growth, and slowly sacrifice foreign policy and macroeconomic policy decisions to foreign creditors.

Continuation of large full-employment federal deficits will restrain economic growth more in the 1990s than in the 1980s. As the economy recovers, private investment will require a growing share of private saving. Competition for available domestic saving will raise interest rates to attract financing from abroad but the international response is likely to be disappointing. This will slow U.S. investment and economic recovery.

Some economists claimed that large federal deficits following the recession of 1981-82 would absorb individual and corporate saving, drive up interest rates, crowd out investment, and truncate the recovery. That didn't occur because foreign financial capital was available. In the 1990s, a recovery may indeed be slowed by deficits because international funds will be less available to make up for lack of private savings. The stock market decline and economy slowdown in Japan and Germany limit the foreign supply of financial capital available to America. America in the 1990s is a less attractive place to invest than in the 1980s because of huge debt and demonstrated lack of fiscal discipline.

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Impact on Agriculture

Farmers are hurt by the cash flow, real wealth, instability, dislocation, and cost-price squeeze impacts of federal deficits. From 1982 to 1986, the farming economy suffered financial stress from high real interest and exchange rates and low exports and commodity prices caused by full-employment deficits. Consumers benefitted in that expansionary phase of the fiscal cycle from cheap imports and high consumption possible when a nation lives beyond its means. The position of traded goods sectors such as agriculture and consumers is reversed in the stabilization phase as the nation stops borrowing more than it lends, consuming more than it produces, investing more than it saves, and importing more than it exports. Gains in the stabilization phase may offset losses in the expansionary phase, but agriculture is a net loser because of the inefficiency and trauma of instability. Agriculture has a huge stake in sound macroeconomic policies.

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Restoring Fiscal Responsibility

The adjustment to a sound economy will be difficult but not impossible. The reason is because the deficit is mostly a transfer payment. Increased government spending and reduced taxes have been financed by borrowing. Every dollar added to the economy through government deficit spending has been offset by a dollar removed from creditors' spending for consumption or investment. Similarly, one less dollar of government deficit spending will leave another dollar in the hands of creditors to spend on consumption or investment. Hence presence or absence of deficits kept within reasonable bounds and financed by borrowing does not have a decisive influence on aggregate demand. Foreign-held debt behaves differently because repayments are less likely to be spent in the U.S. where they help to sustain aggregate demand.

This report could have but did not focus on specific tax and spending changes. For example, introducing a value added tax, reducing payroll taxes, and removing the corporate income tax could encourage saving and investment; indexing capital gains, limiting home mortgage income tax deductions, and extending the school year to 10 months could raise investments in human, material, and technological capital. Raising gasoline taxes by at least 50 cents per gallon could reduce traffic congestion and dependence on foreign oil while encouraging energy efficiency and protection of the environment. Expanded apprenticeship programs, a wage supplement, or enlarged earned income credit could help disadvantaged workers escape poverty. All retirement programs (including Social Security) could be converted to actuarially sound vested investment plans to increase savings. The list could go on but is controversial and hence would require years to pass and implement. Thus the focus must first be on fiscal responsibility.

The principal cause of federal fiscal incontinence has been the decline of encompassing institutions such as political parties. To restore discipline, these institutions must be strengthened. This report details other institutional changes needed to regain control of the federal budget.

Towards a Sustainable Macroeconomic Policy: A Primer on the Federal Deficit, Debt, and the Agricultural Economy

President Clinton's economic program cuts federal outlays for agriculture more than any sector except defense. This is another in a series of setbacks for agriculture stemming from the nation's troubled macroeconomic policy, the major source of shocks to the farming economy in the past two decades. In the 1970s, farm cash-flow problems of inflation arose from overexpansion of the nation's money supply. Recession to "whip inflation now" (WIN) followed by the Reaganomics of full-employment budget deficits created the traumatic financial stress years of 1982 to 1986.

The Balanced Budget and Emergency Deficit Control Act of 1985 was a cause of lower loan rates and a freeze on target prices in the 1985 farm bill. The Omnibus Budget Reconciliation Act of 1990 designed to restore fiscal integrity made deep cuts in the 1990 farm bill and was the *proximate cause* of the 1990-91 recession which cost many farmers their off-farm jobs. Excessive public and private debt has a strong claim to being the nation's foremost economic problem and was the *root cause* of the 1990-91 recession.

The objective of this paper is to explain causes, consequences, and cures for the nation's fiscal policy dilemma. Key questions to be answered include:

1. How large is the federal budget deficit and debt?
2. How do budget deficits and debt affect the economy?
3. What is the impact of the federal deficit and debt on agriculture?
4. What are the limits to federal debt?
5. What must be done to restore fiscal responsibility?

Because laypersons and economists alike lack information on basic issues of macroeconomic policies, considerable attention is given to details in this report. The numbers used herein are continually being revised by federal statistical agencies and are less important than the principles illustrated. Before examining numbers, however, it is critical to address the issue of whether fiscal policy is a problem -- some economists contend it is not.

IS THERE A BREAKDOWN IN THE MACROECONOMY OR IN MACROECONOMISTS?

The federal government has incurred deficits every year since 1960. Some argue that debt accumulation in the 1980s was simply business as usual, but that is incorrect. The deficits were sufficiently restrained to reduce federal debt from 57% of GNP in 1961 to 33% in 1981, the lowest percentage in the post-World War II era. In sharp contrast, the percentage more than doubled to 70% of GNP by 1991. Thus debt accumulation at the 1981-91 rate is unsustainable in contrast to a sustainable rate prior to the 1980s.

Economists have understated the seriousness of federal debt in part because they are of two minds or schools of thought on the issue. The first school holds that deficits *per se* are unimportant; at issue is how the public through the political process chooses to tax and spend over time. The political system is presumed to be a true *revealed preference* of a sovereign and democratic political economy. If deficits accrue in a full-employment economy, it is because society prefers that outcome. The reason for the deficit may be because society chose to invest in military and other capital while deferring payment to later -- it is not the role of economists to question the voters' motives. This school argues that the political process gives society the fiscal policy it wants and deserves.

The second school of thought, to which I subscribe, holds that full-employment budget deficits from 1983 to 1990 were the result of government failure in a flawed political system. The case for this second school is compelling. To the best of my knowledge, no Washington politician justifies the 1983-90 fiscal policy. Most strongly condemn it. Charges of blame and counterblame bounce back and forth between the Administration and Congress; between Democrats and Republicans.

It would be difficult to confuse this political chaos with a well-functioning government. Unlike the invisible hand of the market turning private greed into public good, the political system turns good intentions of individuals into collective fiscal irresponsibility. But this explanation begs the question of why government has lost control of the budget only since 1980.

A deficit is justified to promote economic efficiency and hence real output if it is used to (1) stimulate aggregate demand in a depressed economy, a policy called *Keynesian economics*, or (2) for investments in human, material, and technological capital supplying goods and services that over time will cover the interest and principal and leave a social dividend.

Reaganomics, defined as the *neoKeynesian economics* of large federal deficits in a full employment economy, clearly failed criterion (1) above.[1] Regarding criterion (2), some contend that the defense buildup under Reaganomics was a sound investment in national security that caused the demise of the Soviet Union. That demise, saving billions of military defense outlays in future years, meets criterion (2) above by providing a payoff more than covering the investment in the defense buildup.

Other analysts hotly dispute that conclusion. They contend that collapse of the Soviet Union was inevitable not because of the Reagan defense buildup but because the political-economic system was fatally flawed and unworkable. It collapsed from its own weight. Our military pressure was sufficient without the Reagan buildup. Reasonable people will continue to disagree on that issue. The fact is that if the defense buildup justified deficits in the 1980s, the dividend from such "investment" should justify surpluses in the 1990s. The federal budget continues to be out of control despite an end to the cold war.

One reason why deficits persist and why the political system has served the nation poorly is because economists of all political leanings have poorly informed the process. Conservative economists such as Herbert Stein and monetarist Allan Meltzer hold that worthwhile spending should be pursued regardless of the government's ability to pay, that deficit reductions carry no urgency, and that holding down taxes is more important than balancing the budget. Some conservative economists have reasoned that private individuals and firms increase their savings as they observe government dissavings so as to countervail government actions and preserve private consumption streams over time. This rational expectations application to deficit spending, called the *Ricardian Equivalence Hypothesis*, strains credulity and is not supported by the data.

Liberal economists such as Robert Eisner also maintain that worthwhile social program spending takes precedence over fiscal responsibility. In a mass breach of professional ethics, some 500 economists endorsed candidate Bill Clinton's economic program during the 1992 presidential campaign. That program promised vast new spending for universal health insurance, expansion in training and schooling, infrastructure improvements, tax cuts to spur investment, and a halving of the deficit. All this was to be paid for by cuts in defense spending and a modest increase in taxes only on the rich. Balances in the "cooked" numbers were off by well over $100 billion. Economists knew it; most of the public probably did not.

The public expects Presidential candidates to dissemble; economists need to encourage candor rather than concealment. Politicians do not believe they can be elected by telling the truth in part because economists have not been straightforward with the public.

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[1]Reaganomics should not be confused with supply side economics. Reaganomics included some desirable inducements for economic efficiency such as reduced taxes and public expenditures and moves to a more uniform and hence neutral taxes among resources. But the overarching feature of Reaganomics was large full-employment federal deficits.

An analogy for fiscal policy from 1983 to 1990 is the family headed for bankruptcy. The husband (Republicans) complains that the wife (Democrats) spends to much; the wife complains that the husband earns too little. Their children (the public) only know they are living well now; they are unaware they will be destitute when the money runs out.

The foregoing discussion reinforces the case for the political system failure rather than the revealed preference explanation of America's unsustainable macroeconomic policies. A later section will examine in more depth why the fiscal system has failed and what can be done about it. Before turning to that issue, however, it is useful to understand the size and characteristics of the deficit and debt.

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HOW LARGE IS THE FEDERAL BUDGET DEFICIT AND DEBT?

The size of the fiscal imbalance is measured first by the deficit, then the debt, and finally by projections of each.

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The Deficit

The size of the budget deficit like the size of an elephant can be measured in various ways, depending on the purpose of the measurement. Of interest is the impact of the deficit on the economy (aggregate demand), the extent of traditional public services purchased now to be paid for later, and the tax hike necessary to eliminate the deficit. Adjustments are needed for transitory or cyclical components of the budget in projecting the deficit to the future.

Definitions of the deficit are illustrated using 1991 numbers. Most widely quoted is the *consolidated budget deficit* comprised of government total receipts ($1,054 billion) less total outlays ($1,323 billion), or $269 billion (see Table 1).

The consolidated deficit is comprised of two main components: (1) a *deficit* of $321 billion on so called "on-budget" items such as defense and farm programs financed mainly by excise and income taxes and (2) a *surplus* of $52 billion on so called "off-budget" items (trust funds such as Social Security financed by payroll taxes, plus the Post Office).

At issue is whether to focus on the *consolidated deficit* or the *on-budget deficit*. If the objective is to measure the federal fiscal stimulus to the economy, the consolidated deficit is more useful because the surplus in trust funds is offsetting fiscal stimulus to aggregate demand from the deficit in on-budget items. A more accurate *fiscal stimulus* deficit is the consolidated deficit ($269 billion) less the state and local government surpluses of $30 billion for a total of $239 billion in 1991.

Table 1. Federal Debt, Debt Increase, and Budget Deficit for Fiscal 1980 to 1992.

Year	Federal Debt	Debt Increase	Consolidated Budget Deficit	
	($ Billion)	($ Billion)	($ Billion)	(% of Debt Increase)
1980	909	81	74	91
1981	994	85	79	93
1982	1,137	143	128	90
1983	1,371	234	208	89
1984	1,564	193	185	96
1985	1,817	253	212	84
1986	2,120	303	221	73
1987	2,346	226	150	66
1988	2,601	255	155	61
1989	2,868	267	153	57
1990	3,206	338	220	65
1991	3,599	393	269	68
1992	4,003	404	290	72
1993[a]	4,410	407	322	79

Source: U.S. Council of Economic Advisors, pp. 386, 387.
[a] Estimated.

If the desire is to measure the magnitude of income tax and conventional spending adjustments needed for fiscal responsibility, the on-budget deficit is useful. The surplus in Social Security is omitted because it is essential for building a reserve to finance retirement of the baby boom generation after year 2010 without a large increase in payroll tax rates or cut in benefits at that time.[2] A payroll tax decrease today as proposed by Senator Patrick Moynihan would reduce the payroll burden on the present generation at substantial expense to future payroll taxpayers or benefit recipients.[3]

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[2]At the end of fiscal 1993, the federal government owed trust funds $1.1 trillion. Largest holdings were the Social Security Old-Age and Survivors plus the disability trust funds totalling $382 billion, the hospital insurance fund totalling $144 billion, and the military retirement fund totalling $105 billion. Those who depend on these trust funds for medical care and retirement rightly fear that the government will not repay the entire borrowed principal and accrued interest.

Proposals have been made to tax or otherwise reduce Social Security payments to wealthy recipients. This proposal may be justified on equity grounds to reduce payroll taxes on low paid workers but will not reduce the on-budget current operating account deficit.

[3]The government is required to invest trust fund surpluses in Treasury bonds. While helping to finance the federal debt, these bonds earn interest to fund future recipients of trust funds.

It is well to consider what is the appropriate use of Social Security surpluses which must be accrued today to avoid sharply higher payroll taxes after year 2010. The answer is to invest the funds in high-payoff science, education, infrastructure, and industry which make the economy stronger. Buying power is not preserved for

The distinction between nominal and real debt suggests another correction in the size of the deficit. Adjusted to 1991 prices by the GDP implicit price deflator, debt increased "only" $252 billion in real terms rather than $393 billion in nominal terms between FY 1990 and 1991. In other words, inflation in FY 1991 took $141 billion off the real value of the national debt. Thus the *real consolidated deficit* was $269 - $141 billion or $128 billion in 1991.[4]

The *primary deficit* measures the increase in future liabilities excluding those carried from the past. Interest on the debt and reimbursement of savings and loan bank deposit insurance are outlays for liabilities inherited from previous years. These are not new obligations incurred in the current year and hence are not current purchases of traditional goods and services by the government in excess of revenues. The primary deficit in 1991 was

		($ Billion)
	Consolidated deficit	269
Less:	Net interest on debt[a]	195
Less:	Deposit insurance bailout	66
Equals:	Primary deficit	8.

[a] Excludes $69 billion of interest on borrowing from trust funds. Total interest was $261 billion. Thus the widely reported "interest on the debt" substantially underestimates the actual interest expense -- *if* the trust funds are properly compensated some day.

The implication is that the federal government in 1991 was spending a modest $8 billion more than its revenues to provide health, welfare, military, and other traditional consumption and investment. Thus the lion's share of the current deficit is the result of the nation living beyond its means *in the past*. The small primary deficit helps to explain why the nation's traditional service clientele does not feel much benefit from large current deficits.

future generations if government deficits finance consumption rather than productive investment. Savings are fungible, however. If surplus social security funds were invested in corporate stocks instead of the deficit, the result would be only to draw other savings to finance the deficit for no net change in the economy.

[4]The above calculation is useful in showing how debt increasing at the inflation rate does not increase real interest payment burden on GDP but is capable of much mischief. Such thinking has been a factor causing some countries to induce inflation to reduce debt burden. Such solutions to transfer real income from the public creditors to government works only if the interest rate is fixed and does not contain the inflation premium because inflation was not anticipated. Anticipated inflation is contained in interest rates, hence inflation does not save the government money. Even a government that surprises fixed-interest rate debt holders by inflating price or repudiating debt is likely to get no free lunch because it is cutting off future opportunities to borrow on reasonable terms.

Stated another way, a $261 billion deficit was needed in 1991 just to hold the same level of traditional government services as would have been afforded with no past deficits or S and L rescue. If $69 billion interest on borrowed trust funds would have been paid, traditional services would need to have been *cut* in 1991 despite the $269 billion deficit.[5] Soon, the primary deficit will be negative, meaning that less conventional government goods and services will be provided than if there had never been a deficit, other things equal.

The fact that the nation currently is not incurring a budget deficit to serve immediate consumption is of little comfort, however: obligations incurred in the past must be serviced. Government deficits accrue interest burdens requiring more and more taxes just to maintain a given level of conventional public services.

Most economists agree that government deficits need to act as a shock absorber and automatic stabilizer. That is, in a recession total taxes (but not tax rates) fall and outlays for federal programs such as unemployment compensation rise to cause a budget deficit, stimulating aggregate demand. As the economy recovers, tax revenues rise and outlays for safety net social services fall, presumably moving the federal budget into balance or surplus.

Revenues and expenditures must be stripped of transitory elements to determine permanent tax increases or expenditure cuts needed to eliminate the deficit in a full employment economy. The normalized or *structural deficit*, cyclically adjusted, for 1991 is as follows:

		($ Billion)
	Consolidated deficit	269
Minus:	Deposit insurance	66
Minus:	Business cycle	55
Plus:	Trust fund borrowing (interest & principal)	123
Plus:	Desert Storm net reimbursements	43
Equals:	Structural deficit	314

The recession and deposit insurance payments made the consolidated deficit larger than it would have been in more normal times (see Table 2). On the other hand, reimbursements from other countries for Desert Storm expenses (incurred earlier) and borrowing from trust funds (plus failure to pay interest on what is borrowed) make the deficit look smaller than normal. Correction for transitory elements leaves a full-employment structural deficit

[5]The Clinton Administration has proposed to shift financing from intermediate-term Treasury bonds to short-term bills at about half the interest rate to reduce interest payments. One advantage of short-term financing of the debt with costs that fluctuate with the inflation rate is less incentive for the government to expand money supply to reduce the real interest cost of debt financing. Short-term financing also has drawbacks. Locking into fixed long-term rates insures against higher future interest costs if inflation and interest rates soar. Markets do a pretty good job of adjusting interest rates over time for relative short and long term risks, hence the expected future real cost of debt probably is not much different whether financed short or long term.

of $314 billion. This structural deficit was one-third of 1991 on-budget receipts of $760 billion.

Table 2. Projected Transitory Elements in the Federal Budget, Billion Dollars.

Year	Deposit Insurance	Desert Storm Payments	Borrowing from Trust Funds	Business Cycle
1991	66	43	54	55
1992	13	5	51	75
1993	49	0	58	59
1994	17	0	67	37
1995	5	0	77	27
1996	-7[a]	0	86	21
1997	-16	0	94	16

Source: Congressional Budget Office.

[a] Sale of properties are predicted to turn federal payments to net receipts in 1996 and 1997.

In the above calculation, I assume that on-budget receipts normally need to equal expenditures, hence a balanced budget will have a surplus consolidated budget including trust funds. That approach makes sense for fiscal responsibility, but it can cause dislocations associated with tight fiscal policy. For that reason most other economists compute the structural deficit as a normal consolidated deficit -- including trust fund surpluses.

Further perspective on the relative magnitude of a $314 billion structural deficit is apparent from on-budget operating fund tax receipts by source in 1991:

	Receipts ($ Billion)	Increase Needed to Balance Budget (Percent)
Individual income taxes	468	67
Corporate income taxes	98	320
Excise taxes	42	748
Estate taxes	11	Large
Customs fees and duties	16	Large
Earnings of Federal Reserve System	19	Large
Other (mainly on-budget social insurance)	106	296
Total	760	41

Source: Council of Economic Advisors, p. 387.

The structural deficit could be closed by raising individual income taxes 67%, or by raising all taxes 41%.[6] These numbers suggest that the federal budget will not be balanced by an increase in taxes from traditional sources. A major new tax source may be needed such as the value added tax (VAT)[7] widely used in Western Europe and in Canada.

Despite sizable changes in tax rates, federal receipts have averaged nearly 20% of GDP for four decades. This suggests that the current tax structure may not have much potential for expansion. Thus a new structure emphasizing the VAT has much appeal (see footnote 7).

An alternative is to reduce expenditures alone or in combination with a tax increase to remove the deficit. Itemized on-budget expenditures (like receipts above, uncorrected for cyclical and transitory elements) are shown for 1991 and compared to the structural deficit of $314 billion:

	Operating Expenditures ($ Billion)	Decrease Needed to Balance Budget (Percent)
National defense	273	Large
International affairs, science, technology, space, energy, natural resources and environment, agriculture, commerce, housing, veterans, justice, and general government	238	Large
Interest (On-budget only)	215	Large
Total	726	57

Source: Council of Economic Advisors, p. 387. Excludes Medicare and other components of Social Security.

The normalized deficit cannot be closed by reducing national defense alone; interest alone; or all other expenditures such as science, education, and agriculture alone. All expenditures would need to be reduced by 57%.

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[6]These and later calculations assume unrealistically that tax and expenditure adjustments do not change the economy. In fact, tax increases would need to be larger than indicated because a given increase would slow the economy, creating a need for more taxes to eliminate a deficit.

[7]The VAT taxes value added at each stage of the market. It taxes consumption rather than investment, hence does not retard the economy as much as most other taxes but is regressive. It is relatively easy to enforce because each stage has a self interest in fully reporting its costs which are receipts of the lower stage. Liberal politicians like the VAT because it is opaque and hence can be raised without much protest from taxpayers. Conservatives dislike the VAT for that same reason. Each percentage point of VAT would bring an estimated $25 billion, or more than President Clinton's income tax hike for the wealthy. A 4% VAT could replace the federal corporate income tax. The tax would need to be 5% to cover administrative cost.

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The Debt

Deficits are of concern because they add to the federal debt which must be serviced. That service may be in perpetuity because the debt is unlikely to be repaid. In addition to financing the budget deficit, the government borrows to make loans and guarantees constituting a contingent liability. The increase in the debt of $393 billion in FY 1991 may be a better measure than the budget deficit of additional future fiscal burden (Table 1).

If the borrower defaults or if a bank (covered by deposit insurance) fails, the taxpayers must assume the liability as in the case of savings and loan bank deposit insurance. The savings and loan deposits constitute the largest federal liability shifted to taxpayers, but agriculture is also a significant source. Billions of dollars of liabilities were shifted to taxpayers on Farmers Home Administration direct and guaranteed loans in the 1980s. Former Soviet Union countries are defaulting on billions of dollars of GSM loans guaranteed on export sales made by private American firms. The federal government guarantees billions of dollars of private pension funds and loans which will be serviced by taxpayers in case of default.

Table 1 data show that budget deficits consistently underestimated the liability imposed on the future. From 1980 to 1992, the consolidated budget deficit averaged 74% of debt increases. The differences between deficits and debt increments became larger in recent years. A sharp rise in defaults on federal direct or guaranteed loans and on insured bank deposits and pension plans could bring much larger future federal debt than anticipated.

Federal debt was over four times larger in nominal terms in 1992 than in 1980. In net, three times as much debt was acquired in 12 years than in the previous two centuries! In *real* terms, federal debt was 2.7 times larger in 1992 than in 1980. Debt averages nearly $17,000 for each person and $77,000 per family in the nation. With federal debt at 70% of GDP in 1991, the U.S. set a torrid pace but was not the world's record holder. In the European Community alone, Belgium, Ireland, Italy, and Greece ranked higher.

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Outlook

In the absence of 1993 reforms (not including health insurance) by President Clinton, the consolidated deficit is projected to decline from $290 billion in 1992 to $212 billion in 1996 (Figure 1). With reforms proposed by President Clinton, the deficit is projected to decline to $188 billion in 1996. Deficits are expected to grow again by 1997 under either scenario in Figure 1.

The federal debt rising no faster than national income becomes no more *relative* burden to the economy. Assuming the economy grows 5.5% annually (2.5% real plus 3% inflation), a $200 billion annual deficit and addition to debt could be tolerated without a growing relative financial burden.

The Clinton Administration's proposal would reduce the deficit below $200 billion in fiscal 1996 and 1997, but skepticism is in order. The President's program may not be enacted. Projections may be faulty. The economy may grow more slowly than expected. Ambitious new health and other programs may add to expenditures without a corresponding increase in receipts. A better measure of the fiscal shortfall may be the projected increase in debt, which has averaged 35% higher than deficits (see Table 1).

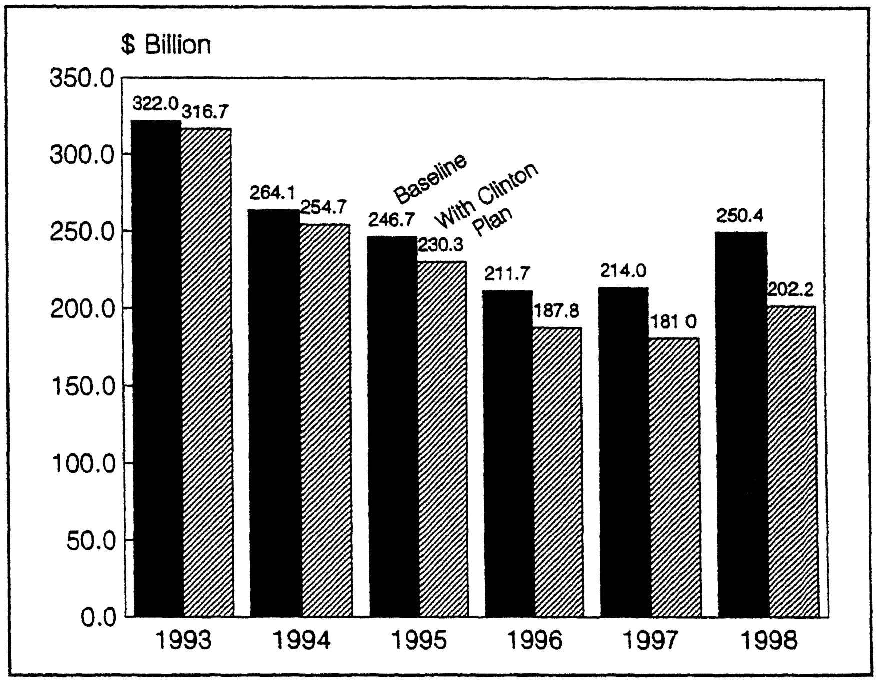

Figure 1. Consolidated Budget Deficit Projections.
Source: President of the United States, p. 2.

If the historic debt pattern shown in Table 1 continues, debt would increase $254 billion in FY 1996 and $245 billion in FY 1997 under Clinton's deficit projections of Figure 1. Reducing this debt increment to a sustainable $200 billion in 1996 would require a deficit reduction of $42.3 billion compared to the $23.9 billion reduction proposed by President Clinton. By this calculation, the Clinton economic plan even in the *highly unlikely* case that it is fully implemented and behaves as predicted will fall short of reaching a sustainable debt growth level by 1996. If history is repeated, fiscal reforms proposed by President Clinton will fail and that the federal deficit will be larger in 1996 than it was in 1992. Also if history is a guide, the national debt will be a larger proportion of the GDP in 1996 than it was in 1992.

HOW DO DEFICITS AFFECT THE ECONOMY?

Federal deficits influence economic efficiency and the real economy but are mostly income transfers raising issues of equity among people and over time.[8] The impact of the deficit on the economy, economic efficiency, and equity depends on what funds are used for, how debt is financed, who holds debt, the state of the economy, and the length of run.

Use of the Deficit

As indicated earlier, deficits are justified to (1) stimulate aggregate demand during recession to put the economy to work, and (2) invest in durable human, material, and technological capital for long-term economic growth. A broad rule is that a deficit improves the economy if it provides discounted benefits in excess of costs. That means it must not only raise investment but that investment must have as high or higher payoff than and complement rather than displace that in the private sector.

Public and private debt reached historic highs relative to GNP before each of the major economic downturns in this century (Figure 2). Accumulation of excessive private debt was a key element behind the recession of 1990-91, playing a role similar to excessive inventory accumulation in previous recessions. Excessive federal debt prolonged the recession because it restricted the scope for stimulative fiscal policy to move the economy quickly out of recession

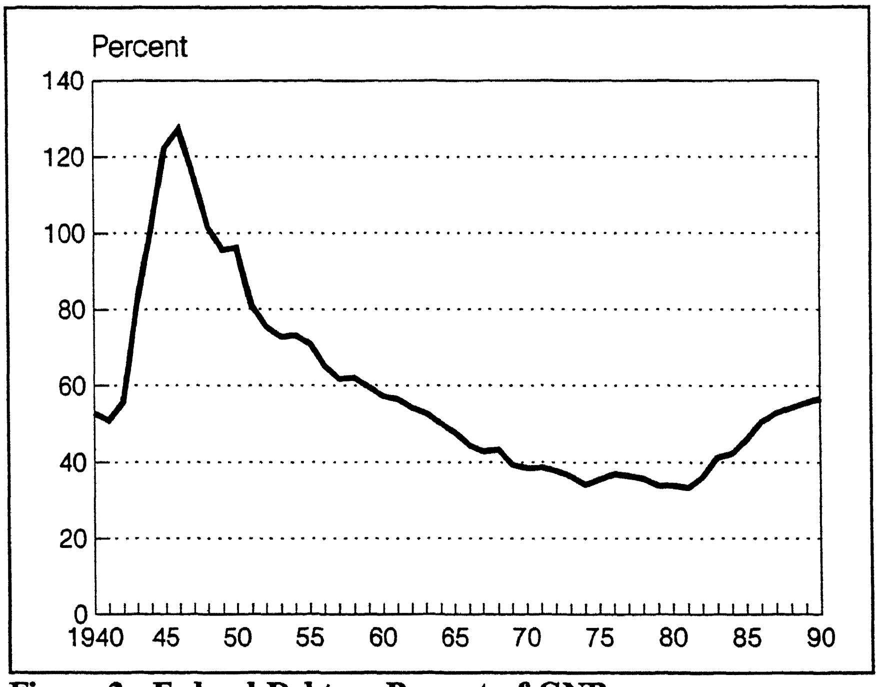

Figure 2. Federal Debt as Percent of GNP.
Source: Federal Reserve Statistics.

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[8]*Economic efficiency*, how well resources are allocated, determines the size of the "pie" of real goods and services in the economy. *Economic equity*, how that pie is divided among people and over time, also influences well-being of people. The *real economy* is goods and services available to satisfy wants of people; *transfers* are shifts of buying power among individuals and over time which may or may not influence the real economy.

(Figure 3). If the economy had not run large deficits from 1984 to 1990, large primary deficits of $269 billion in 1991 and $290 billion in 1992 would have ignited the economy.

Private debt as a proportion of the nation's income is being worked down and hence appears to be tractable. Meanwhile, public debt, most notably federal debt, continues to mount both in total and as a proportion of national income (Figure 3).

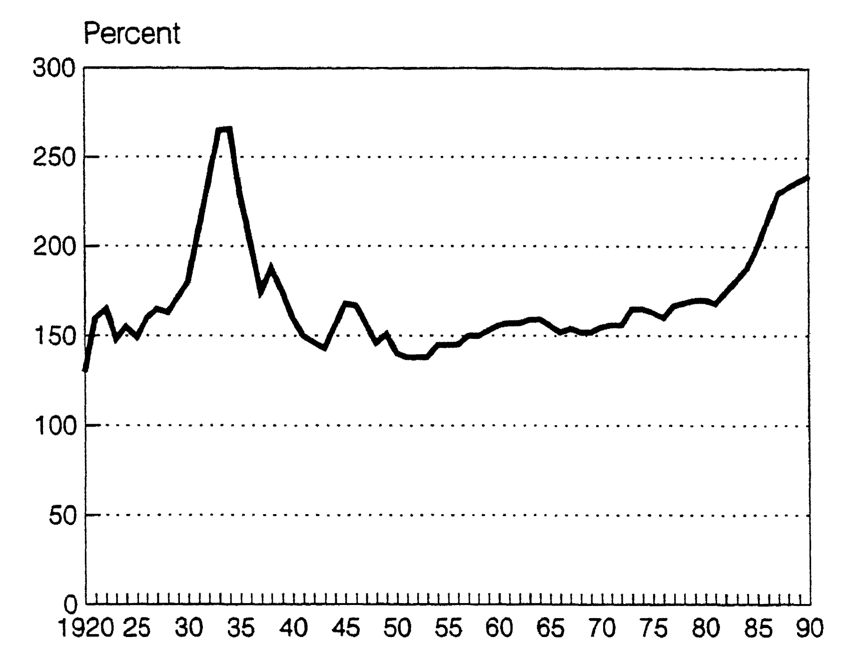

Figure 3. Public and Private Debt as Percent of GNP.
Source: Federal Reserve Statistics.

The real impacts on the economy in foregone real goods and services may be quite different than costs or deficits borne by government. In the case of the savings and loan bank insured deposit debacle, the economy overexpanded because of investment tax credits, accelerated depreciation allowances, the oil boom, and other factors. The real cost to the economy was building of unneeded houses and office buildings. Defaults on loans to acquire such property caused bank failures and financial losses passed by the private sector to the government. The over-built real estate was the real cost; who ended up paying the cost was an issue in transfer payments. Special interests pressure the government to socialize losses and privatize gains. Unfortunately, such pressures have often succeeded. The result is economic inefficiency from excessive risk taking by a private sector aware that losses can be passed to the government and taxpayers.[9]

[9] The ideal tax system is neutral, not favoring capital over labor or debt capital over equity capital. The investment tax credit (which some propose to revive) favors capital over labor, inviting overinvestment in buildings and equipment. Meanwhile, the government proposes to raise taxes on labor to finance apprenticeship training, health insurance, and other measures. A wiser course would be to reduce payroll taxes and eliminate corporate taxes with their double taxation of profits which encourages excessive debt versus equity financing. A value-added tax is an alternative.

The ability to deduct interest cost of debt capital but not the dividend cost of equity capital from expenses causes excessive expansion of debt -- a major source of recession noted in this report. Having a neutral tax system would require the same tax rate on ordinary income and capital gains after the latter are adjusted (indexed) for inflation.

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Method of Financing

The method of financing a deficit influences the economy. A federal spending increase can be financed by taxes, borrowing, or printing money.

1. *Printing Money*. Governments able to create money are sorely tempted to print money to finance deficit spending after exhausting their taxing and borrowing power. For some countries, domestically held debt has become too large to finance by taxes (without sending the economy into a recession that increases deficits) and exports will not service foreign held debt without sacrificing essential imports such as petroleum. *A country is technically bankrupt when an attempt to reduce a deficit and debt causes them to increase*. Increasing taxes and decreasing spending reduce aggregate demand. With a deteriorating economy, there is little recourse but to default on debt or print money. Monetary expansion causes inflation when real output of goods and services does not keep pace with the money supply.

   Inflation "taxes" by removing buying power of those whose income and wealth do not keep pace with inflation. If pursued far enough, financing by printing of money brings capital flight, hyperinflation, disintegration of the formal economy, and social and political unrest. Large, often inequitable, income transfers occur. Creditors lose confidence in the system and refuse to lend. Saving is discouraged because buying power erodes with inflation. An advanced economy cannot function that way. The United States has not chosen to finance the deficit with an inflation "tax" but pressures exist to do so as debt mounts.

2. *Taxing*. A spending increase financed concurrently by a tax increase does not create a deficit and will not stimulate the economy because it removes as much buying power as it adds to the economy.[10] A joint spending and tax increase will raise the public share of the economy; it may or may not promote efficiency and equity. Many of the implications are similar to those for borrowing discussed below.

3. *Borrowing*. The third means of financing is borrowing. The nation has chosen that path to finance its debt. The impact of borrowing to service expenditures depends partly on who holds debt.

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[10]The *balanced budget multiplier* of 1.0 is a basic Keynesian concept. The multiplier implies that a $1 billion increase in *taxes and expenditures* will increase national income by $1 billion. The multiplier unrealistically assumes a perfectly elastic supply of output, no administrative cost, and no government waste or distortion of business incentives in collecting taxes and spending them. None of these assumptions hold; a simultaneous increase in taxes and expenditures may reduce real national income if resources are diverted from higher payoff private uses.

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Who Holds Debt?

Debt is held by foreign and domestic lenders, and by the public and private sectors. Of the $4.0 trillion federal debt in 1991, $2.6 trillion was held by the public, $1.1 trillion was held by federal trust funds, and the remaining $.3 trillion was held mainly by the Federal Reserve Bank (Table 3). The latter arises from a privilege of seignorage (ability to create money) and responsibility to control the money supply accorded the federal government. The Federal Reserve expands the money supply by buying debentures, thereby placing cash balances in the hands of debenture sellers who use them to purchase goods and services. The Federal Reserve has such operational needs whether or not the federal government runs deficits.

Table 3. Private Holders of Public Debt, September 1991.

Holder	**Amount**	
	($ Billion)	(Percent)
S and Ls, pension funds, credit unions, etc.	691	27.0
State and local governments	520	20.3
Foreign	455	17.7
Individuals	264	10.3
Commercial banks	233	9.1
Insurance companies	169	6.6
Corporations	151	5.9
Money market funds	80	3.1
	2,563	100.0

Source: Council of Economic Advisors, p. 396.

Among trust funds, the largest projected federal holdings (borrowing) at the end of fiscal 1993 are the federal old age and survivors insurance trust ($367 billion) and the federal employees civil service retirement and disability trust fund ($310 billion). Borrowing of the federal government from the Social Security surplus totals about $400 billion.

The categories of private holders of the $2.6 trillion of publicly held debt are shown in Table 3. Those who lend to finance the national debt are more wealthy than the general population, but considerable numbers of persons in pension funds, credit unions, and the "individual" category in Table 3 are not wealthy.

According to Table 3, foreigners held less than 20% of the public debt in 1991. At the margin they are more important than that. In a full employment economy, *private* investment tends to absorb all domestic *private* saving, hence the public debt needs to be financed by foreigners (see Council of Economic Advisors, p. 328 for comparison of private saving and investment over time).

Domestic creditors will tend to maintain aggregate demand by spending any reimbursed funds on domestic consumption or investment if the current borrow-and-spend policy changes. The same cannot be said for foreign holders of debt. They are more likely to spend abroad money no longer needed to finance U.S. debt. The impact is to reduce aggregate U.S. demand. Paying off foreign debt requires export earnings and hence especially impacts traded good industries. Thus the domestic economy is affected differently by repaying foreign held debt than by repaying domestically held debt.

The issue of who holds the federal debt sometimes causes confusion as apparent from the statement of economists Ross LaRoe and John Pool:

> The $4.2 trillion is the gross debt. To get the right number, you have to calculate the net debt. That means you have to subtract the amount of debt held by the Federal Reserve system and the Social Security trust funds. The Fed owns about $300 million, and the Social Security system owns $1 trillion [incorrect, as noted earlier], so the government essentially owes $1.3 trillion to itself, leaving a net debt of only $2.9 trillion, hardly enough to worry about [p. 2C].

One of the great fears of future Social Security recipients is that the multi-trillion dollar debt regarded cavalierly as "hardly enough to worry about" will cause the federal government to renege on repaying principal plus interest on its debt to trust funds.

The debt the government seemingly owes itself is mostly owed to Social Security, federal employees, and other trusts that one day must be repaid mostly from income taxes. Hence debt owed by government to "itself" for the most part is no different than debt owed to the public.

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State of the Economy

A deficit has a very different effect on a full-employment economy than on a less-than-full-employment economy. The latter economy is characterized by idle industrial capacity, workers eager to but unable to find work, and by excess saving because savers hold income for a "rainy day" while investors are too pessimistic to spend for the long term. A deficit raises aggregate demand, puts plants and people to work, raises income, and creates a climate of optimism for the future. Inflation is modest because idle resources put to work do not bid up prices and costs. The normal relationship of saving to investment returns as the economy reaches full employment.

Unfavorable consequences result from government deficits continued in a full-employment economy when private (individual and corporate) investment tends to utilize all private saving. A fundamental relationship governing trade is that net domestic private savings (gross savings S less investment I) plus net domestic local, state, and federal government savings (revenue R minus expenditures E) equals net exports (exports X less imports M in the balance of payments). In other words, investment and government expenditures in excess of domestic savings and taxes must be financed by foreign capital inflow which is supplied dollars by a trade deficit. The formula and the numbers for 1980, 1982, and 1986 are shown below:

	(S - I) +	**R - E (state, local)** +	**R - E (federal)** =	**X - M (exports less imports)**
			($ Billion)	
1980 (full empl., small def.)	32.5	24.8	-60.1	1.1[a]
1982 (recession)	114.1	26.9	-135.5	-5.9
1986 (full empl., large def.)	4.2	54.3	-201.0	-145.4

Source: Council of Economic Advisors, pp. 328, 389, 412.
[a] Sums are not exact because of inventories of dollar reserves abroad, errors in data, time lags, etc.

The years are selected to illustrate the impact of federal deficits on the balance of payments under various employment scenarios. The first scenario, 1980, shows a small federal deficit of $60 billion under full employment. A modest private (individual and corporate) surplus of saving over investment coupled with a small state and local government surplus offset the federal government deficit. The result, as predicted by the formula, was a balance of payments near zero.

The second scenario, 1982, illustrates what happens to trade with a large federal deficit when the economy is in recession. When individuals and firms save their income and fail to invest out of pessimism regarding the future, the result is excessive private saving relative to private investment. Supplemented by a modest state-local government surplus, the net saving financed the federal deficit of $135.5 billion in 1982 so that trade was almost in balance. The deficit was justified to offset what was saved and not invested, and hence to maintain aggregate demand and revive the economy. The deficit did not distort trade or require foreign financing.

The third scenario, 1986, is for a full-employment federal deficit. In the full-employment economy nearly all private saving is utilized for private investment. The $54 billion state and local government surplus in 1986 was enough to finance only part of the federal deficit. Most of the federal deficit had to be financed from abroad. Foreigners earned dollars to finance the deficit by running trade surpluses with us. That translated into a balance of payments deficit for the United States of $145 billion in 1986.

Some lessons follow:

1. The trade deficit and budget deficit are "twins"in a full-employment economy but not in a recession.

2. Federal deficits are appropriate in a recession to absorb the private saving surplus, maintain aggregate demand, and generate economic momentum.

3. The federal budget needs to be in balance or surplus in a full-employment economy to avoid trade and other distortions, including accumulation of debt. In a full-employment economy open to trade and investment, deficits raise real interest rates, the value of the dollar, and imports -- all harmful to agriculture as a net debtor and exporter. Agriculture is especially interest sensitive because it uses more capital per worker than other industries on average. In a closed full-employment economy, federal deficits raise interest rates even more because relatively elastic foreign supplies of financial capital are unavailable.

4. Larger net private savings (S-I) help to offset government dissavings (negative R-E), resulting in greater net exports. The U.S. consumer savings rate of 4% in 1993 compared unfavorably with the Japanese rate of 18%; the German rate of 15%; and the British, French, and Canadian rate of 12% (The Outlook, p. A1). These other industrial countries can have relatively large government deficits without becoming net importers.

The above example shows only what is happening to the U.S. balance of payments flow of goods and services. *That net flow mirrors opposing capital flows*. In fact, the *complete* balance of payments account always sums to zero because any shortfall in goods and services shown in the right hand column of the above text table is always offset by an equal inflow of capital.

Current account deficits represent claims of foreigners on the United States. Data on financial claims of Americans on foreigners and of foreigners on Americans are inexact because of problems in valuing property. At estimated market value, the *net* annual foreign investment position of the U.S. went from $268 billion in 1983 to -$382 billion in 1991, a total deterioration of $650 billion. The nation has gone from being the world's largest creditor to having fewer assets abroad than foreigners have in the U.S.[11] As net foreign debt accumulates, a nation increasingly sacrifices its domestic macroeconomic policy and foreign policy to foreign private creditors and governments.

Receipts from earnings on U.S.-owned assets abroad exceeded net payments to foreigners for earnings on their assets in the U.S. by only $16 billion in 1991. Thus foreigners earn about as much on their assets in the U.S. as our assets earn abroad. If rates of return are about equal, the current small *net* earnings suggest that U.S. assets abroad about equal debts (see footnote 11). If the 1983-91 trend continues, however, foreigners will have far larger investment and earnings in the U.S. than the U.S. has abroad. This is not necessarily because *private capital* is more productive in the U.S. -- and hence an attraction to foreign investors. Foreign capital inflows have been motivated by higher returns resulting from the low supply of savings relative to demand for savings to finance the government deficit.

Open Versus Closed Economy to Trade and Investment

The foregoing analysis assumed an economy open to foreign trade and capital flows. Imagine the impact of a large federal deficit in a closed full employment economy. Because private investment typically utilizes virtually all individual and corporate saving in a full employment economy, the deficit would have to be financed out of domestic savings in a closed economy.

Competition for limited domestic savings between domestic investors and government would drive up interest rates, encouraging some additional private saving but mostly crowding out private investment. The result would be a severe setback to interest-sensitive sectors of the economy such as automobiles, housing, and agriculture. These setbacks might be offset by increased spending elsewhere. However, the high interest rates would crowd

[11]At market value, the U.S. investment position was as follows in 1983 and 1991 (Council of Economic Advisors, 1993, p. 461):

	1983	1991
	($ Billion)	
U.S. assets abroad	1,068.3	2,107.0
Foreign assets in U.S.	800.7	2,488.9
U.S. net international investment position	267.6	-381.9

The $650 billion net deterioration of the U.S. position from 1983 to 1991 is a serious concern. It is widely stated that the nation has become the world's largest net debtor since 1983. If the U.S. is not the world's largest debtor, it may soon achieve that dubious distinction. Ordinarily, a capital rich country would be a net creditor to the rest of the world.

out private investment, slow real economic growth, and might create unemployment. The nation would have had difficulty pursuing its full employment deficit policy of the 1980s without the relatively recent creation of efficient international financial capital markets.

In summary, the economy may continue to experience full employment with deficit spending but future economic growth is retarded because government-led consumption is replacing private capital formation. The added cost of interest payments makes macroeconomic reform at once more burdensome and more needed. Sustained government deficits are politically unappealing in a closed economy because they sharply raise interest rates, crowd out private investment, and create heavy pressure to print money and cause inflation. Open economies drawing on the relatively new and efficient international capital market can avoid many of the politically unfavorable short-term impacts of full employment budget deficits. Flexible exchange rates and efficient world financial capital markets have lessened macroeconomic policy discipline.

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The Fiscal Policy Cycle

The nation cannot continue to live beyond its means, consuming more than it produces, importing more than it exports, and borrowing more than it lends. Deficits, trade balances, and borrowing rates of the past decade are unsustainable.

Reaganomics has two phases: the *expansionary phase* described above by a nation living beyond its means is followed by a *stabilization phase* characterized by production exceeding consumption, exports exceeding imports, and capital outflows exceeding inflows. In the U.S., some aspects of the turnaround to the stabilization phase are already apparent such as lower interest rates, lower dollar, and lower trade deficit. Some of that turnaround was caused by the 1990-91 recession resulting in part by an attempt to restore fiscal responsibility through the Omnibus Budget Reconciliation Act of 1990. The full turnaround to the stabilization phase has not yet occurred -- unsustainable budget and trade deficits continue.

An important point is that consumers were better off in the expansionary phase of Reaganomics and traded goods industries such as agriculture were worse off. As the nation moves into the stabilization phase, consumers will be worse off and traded goods sectors such as agriculture will be relatively better off.[12] The low dollar will be saying that a trade surplus resulting from decreased imports and increased exports is necessary to service debt and pay for imports.

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[12]In other ways agriculture may be worse off with stabilization. Commodity programs are tempting targets for balancing the federal budget in the austerity of the stabilization phase. Furthermore, the stabilization phase featuring lower interest and exchange rates is accompanied by recession "exported" to the rest of the world because we buy less abroad. The recession abroad can offset U.S. farm export gains from the lower dollar.

The cycle of expansion and stabilization phases under Reaganomics does not mean that agriculture and the economy as a whole average out to as favorable a situation as with a sound macroeconomic policy for steady, sustainable economic growth. For example, farmers lost in the financial crisis of the early 1980s caused by high interest and exchange rates and low exports are not retrieved or compensated in the stabilization phase. The trauma of instability plagues the entire economy, causing wrenching adjustments as sectors expand and contract. A dynamic growing economy continually renews itself by shedding the inefficient while efficient firms emerge with new technology, management, and products meeting new demands. That healthy renewal process has nothing in common with the fiscal cycle featuring change for the sake of change under unsustainable, binge macroeconomic policies.

Reaganomics is a somewhat mild manifestation of what I have referred to elsewhere (Tweeten, December 1989) as the *Economic Degradation Process* or EDP. The EDP is caused by macroeconomic policies of a country attempting to live beyond its means. Typical steps are as follows:

1. Large *government current account deficits* (and/or capital account deficits for low-payoff investments).

2. *Increased taxes* to cover deficits, often causing serious economic distortions either because of reduced incentives to produce or costly machinations to circumvent taxes.

3. *Borrowing* because taxes are insufficient. Borrowing usually begins in the domestic economy but extends internationally as local sources prove inadequate or too damaging to domestic demand.

4. *Printing of money* when neither taxing nor borrowing can meet the perceived need to consume.

5. *Overvalued currency* in foreign exchange because governments are reluctant to devalue currency -- a politically unpopular measure imposing burdens on well-to-do, politically influential urban consumers of imports whose prices would be inflated. Countries defend their overvalued currency in the name of national pride and prestige.

6. *Shortage of foreign exchange* as imports continue to exceed exports. The result may be a run on the currency, financial crisis, and shortages of critical imports such as petroleum and spare parts.

The EDP is a macroeconomic policy failure, but it tends to create failures of other types. It encourages trade distortions of all types designed to raise exports and reduce imports.[13] It creates flight of sorely needed domestic capital because nationals fear loss of buying power with inflation and devaluation. It creates instabilities and uncertainties that are the enemy of investment, capital formation, and economic growth. In the stabilization phase, an undervalued currency attracts foreign investment. However, residents may view purchase by foreigners of domestic farm and other real estate as a threat to national sovereignty.

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Length of Run

The impact of budget deficits and debt varies with length of run. Economic growth depends on how well resources are allocated, including allocation of income to current consumption versus saving to invest in capital generating future income.

As noted earlier, personal saving rates of Americans rank near the lowest among industrialized nations. Government budget deficits add to the problem of low national saving because they are *negative saving* offsetting foregone consumption (saving) of individuals and corporations. In national income and product accounting, deficits are treated much like investments but are not investment because they are used mostly to finance current consumption. The borrowing to finance federal deficits diverts private funds to current consumption by government; part of those funds would have been invested in private capital to generate future income streams.

In early years of deficits, those (many of them wealthy) who finance the federal debt forego consumption and lend their income to government which uses the money to pay for its activities. If the proportions saved and consumed were the same for government and creditors and if each consumed and invested with equal efficiency, the economy would be the same size and would grow at the same rate over time as with no deficit. The Ricardian-Equivalence Hypothesis (REH) holds that taxpayers and/or public service recipients who could benefit from additional consumption made possible by deficits actually maintain a "permanent consumption stream." They do so by saving income in the expansionary phase of Reaganomics to invest and later spend in the stabilization phase when their taxes will be raised and government benefits curtailed to pay for the first phase. REH holds that creditors and program beneficiaries use borrowing and lending to maintain their consumption stream on a fixed trajectory over time.

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[13]An example may be trade sanctions imposed on Japan for alleged trade barriers causing the large trade deficit with the U.S. However, most of the deficit is from the high savings rate in Japan and the low savings rate and large federal government budget deficit in the U.S. The result could be a trade war threatening our largest farm export market.

REH is not supported on conceptual and empirical grounds. It implies a degree of knowledge and economic sophistication few Americans possess. The declining gross private saving rate in the mid-1980s compared to earlier years provides no evidence for REH (Council of Economic Advisors, p. 238).

A more plausible conclusion is that in early years creditors forego consumption and some private investment to lend to government; in later years creditors consume more as their income is enhanced by interest and principal repayments. Persons whose taxes are postponed or whose government program benefits are enhanced increase their consumption in the deficit or expansionary phase and curtail consumption in the stabilization phase. The temporal impact is to transfer consumption to the current from the future generation of taxpayers-government service utilizers and to transfer some consumption to the future from the current generation of lenders. Effects on lenders are not large because they have alternative outlets for funds in all phases of the fiscal cycle.

Some contend that consumption by the current generation is more important than consumption by the next generation because any bias toward the current generation is at least offset by technological progress allowing the next generation to live better than the preceding generation. Budget deficits help to redress that intertemporal inequity. A counterargument is that irresponsible fiscal policy will diminish chances for succeeding generations to live better. For the most part, government failure is more frequent than market failure. Government probably has a lower propensity to invest well than does the private sector, hence beyond some point diversion of funds from the private to the public sector reduces national income. A smaller government budget used cost-effectively could meet all needs for the government to supply public goods such as environmental protection, schooling, basic research, and infrastructure as well as supply health and welfare benefits for those unable to provide for themselves. Any increase in government spending above this level reduces real national income.

Concluding Comments

With the many consumption and investment opportunities available to them, lenders would probably do about as well in the short and long run without government deficits to finance. Consequently, the principal impact of deficits is to transfer income to current taxpayers and government service recipients from future taxpayers and service recipients.

Most economists contend there is no reason to favor current government benefit recipients and taxpayers over future recipients and taxpayers, hence full-employment current account deficits make no sense. The issue is more than one of intergenerational equity, however, and also touches on efficiency and stability (or sustainability). Deficits increase demand relative to supply of saving, raising real interest rates in the long and short run. The impact is inequitable in raising income of creditors relative to poorer taxpayer and government service recipients, and is inefficient because investment and income growth is slowed.

Unsustainably large deficits cause the deficit cycle of expansion and stabilization explained earlier, creating instability that is a hardship to a risk-averse population. Even if the income averages out over the fiscal cycle, the dislocation of people and firms between the expansion and stabilization phases is traumatic to many. Full-employment deficits remove fiscal policy as a tool to lift the nation out of recession. Long-term economic growth is determined by wise investments in human, material, and technological capital (that determine productivity). Deficits waste resources by funneling an undue portion of GDP through the public sector which has a poor overall record of investment choices and efficiency. We do not have reliable empirical measures of the impact of full employment deficits on long-term economic growth, however.

WHAT IS THE IMPACT OF FEDERAL DEFICITS AND DEBT ON AGRICULTURE?

The foregoing discussion indicating that full-employment federal deficits contribute to economic instability, dislocations, slow growth, and transfers from future to present taxpayers and government benefit recipients applies to the overall economy. Impacts on agriculture are noted briefly below.

In earlier decades agriculture was heavily influenced by national business conditions through aggregate domestic demand originating from income and employment. Now agriculture is more influenced by changes in interest, foreign exchange, and inflation rates caused by policy-induced macroeconomic cycles. *Cash-flow, real wealth, cost-price squeeze, and instability* impacts of unsound monetary and fiscal policies are discussed in detail elsewhere (Tweeten, 1989, Ch. 6) and are treated only briefly here.

Deficits cause high real interest and exchange rates which hurt agriculture in the expansion phase but lower rates help agriculture in the stabilization phase of the fiscal cycle. Although the *cost-price squeeze* in the expansionary phase may be offset in the stabilization phase, the *instability* and dislocations caused by binge macroeconomics damage the farm economy. High real interest rates and less exports in the expansionary phase caused massive *real wealth losses* to agriculture from 1982 to 1986.

Problems encountered in financing federal debt out of taxes and borrowing could bring intense pressure to create money. The resulting inflation could make investment in real assets such as farmland more attractive, but would generate a *cash-flow squeeze* because inflation raises immediate costs and defers returns which come as capital gains to land owners. Higher land prices would restrict entry of young operators.

Fiscal excesses of the 1980s removed fiscal policy as a tool to quickly end the 1990-91 recession. This hurt farmers depending on off-farm jobs. The prolonged U.S. downturn was exported to the rest of the world, thereby reducing demand for U.S. farm exports. The cycles of unsound monetary and fiscal policies created *uncertainty* aggravating nature's shocks such as droughts difficult enough alone for agriculture to bear.

The effort to reduce the federal debt in 1990 is another example of a man-made shock to agriculture. The Omnibus Budget Reconciliation Act of 1990 adjusted the 1990 farm bill to create the 15% flexible base, trimming federal program benefits for agriculture accordingly. Real loan rates on wheat and corn fell 55% and real target prices fell 35% from 1983 to 1993. Whatever the economic merits or demerits of farm support levels, budget stringency was a proximate cause of their decline.

Full-employment federal deficits financed by borrowing rather than printing of money avoids inflation. But borrowing like printing of money distorts the economy. Many distortions hurt agriculture directly in the short run as noted above. In the long run, distortions slow national economic growth. Because per capita income of farmers is ultimately determined by per capita income of nonfarmers, it follows that macroeconomic policies that diminish the nonfarm economy ultimately reduce real earnings of farm people.

WHAT ARE THE LIMITS TO DEBT?

The numerous past efforts at responsible fiscal policy have all failed. If President Clinton's effort also fails, it is well to consider what might ultimately restrain fiscal policy.

What limits debt in a world where countries formally do not go bankrupt? At the extreme, an economy can no longer function when interest on the debt equals the gross domestic product (GDP). Nominal GDP increased 5.0% per year while nominal debt increased 13.3% per year from 1980 to 1991. If the interest rate is 7%, interest on the debt will equal the entire GDP in only 41 years at these rates of accumulation! Years required for interest to exhaust GDP are shown for other scenarios in Table 4. Only cases where the debt growth rate exceeds GNP growth rate have limits. Note that the 1980-91 experience where the rate of gain in debt exceeded that in GDP by 13-5=7 percentage points gives solutions similar to those in the table where debt growth also exceeds GDP growth by 7 percentage points.

Table 4 shows upper limits; other forces will slow debt growth much sooner. A country is technically bankrupt when efforts to *reduce* the deficit slow aggregate demand and the economy enough to actually *increase* the deficit. The Omnibus Budget Reconciliation Act of 1990 contributed to recession in late 1990 and 1991 but only because the economy had been seriously weakened by excessive private and public debt. Continued large federal deficits could lead to a situation where lower deficits would send even a normal economy into recession.

Table 4. Years Required for Interest on Federal Debt to Equal GDP.

Nominal GDP Growth	Interest Rate (%)		
Rate (%)	5.0	7.0	9.0
	Deficit Accumulation Rate (7%/yr.)		
3.0	87	78	72
5.0	176	158	144
	Deficit Accumulation Rate (9%/yr.)		
3.0	58	53	48
5.0	89	80	73
7.0	179	161	147
	Deficit Accumulation Rate (11%/yr.)		
3.0	44	40	36
5.0	60	54	49
7.0	90	81	74

Numerous third-world countries in Latin America and Africa became *technically* bankrupt in the 1980s. Foreign debt service requirements were so large they could not import capital and technology essential to maintain national output. Debt subsequently was forgiven or restructured in many cases; still the result was a decade of foregone economic growth. Although we do not know the critical debt-GDP ratios and foreign debt service-export ratios above which a nation becomes technically bankrupt, we do know that nations with high ratios have not honored their commitments to creditors.[14] Among such nations, money creation (inflation) has been their domestic policy of choice to reduce the burden of debt. Creditors and others whose asset values and income do not keep pace with inflation thus are "taxed." Monetizing may reduce the burden of domestic debt but does not absolve responsibility for foreign debt payable in hard currencies. Governments printing money to service debt destroy financial assets of their citizens, lose credibility, create social unrest and political instability, and must pay higher interest on future credit to compensate for risk and loss of trust.

When a small country defaults, the world financial system is not threatened. If the United States were to default, the world financial community would face severe crisis if not collapse.

[14]U.S. federal debt was 70% of GDP in 1991. Ratios above 100% become especially troublesome.

Some cite the much higher ratio of public debt to GNP after WWII than today as evidence our debt burden is not serious. The comparison is not relevant, however. First, combined public and private debt were not high (see Figure 2). Second, after the war we were the dominant economy facing a world of growing demand and little competition. The situation is entirely different today.

The most likely crisis bringing Americans to realize the seriousness of the federal debt would be a run on the dollar as sellers dump dollars in favor of other foreign currencies. The dollar would fall sharply as the nation would exhaust its foreign exchange reserves.

The collapse of the dollar would be more than a short-term crisis. The most serious long-term consequence would be for the world to shift from dollars to the yen and mark as its reserve currencies. America would lose benefits of seigniorage it has enjoyed so long -- receiving goods and services imports in exchange for dollars which exporters use as currency rather than claims on our scarce resources to supply them goods and services. Oil prices could be denominated in more reliable currencies. With the dollar no longer an international currency and oil prices not again set in dollars, American inflation no longer would reduce our real cost of oil imports.

Commercial trade and debt service denominated in our own currency gives the United States a great advantage over other nations incurring debt. If domestic prices inflate 100% and the dollar value is halved in international exchange, the United States can pay off its foreign debts with half as many resources as before. That makes inflation and devaluation manageable if not downright attractive. If the dollar is no longer the world's currency, our debts will be denominated in more stable currencies and will have to be serviced at full resource value.

A falling value of the dollar raises our import costs and reduces our living standards. Devoting a significant portion of our exports to service foreign debt would leave less export earnings to purchase foreign goods and services for maintaining living standards. The nation's superpower role in providing foreign aid and security would be threatened. Attracted by a cheap dollar, foreigners would buy up a rising share of the nation's farm and other real estate. Our domestic macroeconomic policies would be subject to foreign scrutiny. Our policies would need to be designed to retain confidence of foreign investors in the U.S. Protectionist elements would gain new prominence. Trade wars and other disruptions of world commerce could be commonplace.

In short, the limits to debt cannot be predicted with precision but the consequences of approaching them are devastating. A wise policy is to begin immediately to restore fiscal integrity. To avoid shocks that could increase the deficit by causing recession, deficits need to be reduced gradually over a 5-year period or longer.

WHAT MUST BE DONE TO RESTORE FISCAL RESPONSIBILITY?

Sound macroeconomic policy is straightforward. In monetary policy, it means expanding the money supply at essentially the rate of full-employment real output growth --

approximately 2.5% annually in the United States.[15] In fiscal policy it means running a current account in balance or surplus, and incurring deficits only in recession. The broad guidelines are simple; achieving them is difficult indeed. This section lists suggestions for institutional reform needed to implement sound policy.

The inability of government to control debt since 1980 has numerous explanations. One is that the current generation is a special interest group. Some contend the problem is uninformed voters and the political rise of the "instant gratification" generation of baby boomers. Like a family, a nation can borrow and spend as if there is no tomorrow until credit worthiness and borrowing capacity are gone. Latin American strongmen have been doing this for decades. Perhaps it is surprising that the American government was so slow to discover it. More plausible explanations than free-spending baby-boomer voters are offered below.

A government in a closed economy can live beyond its means but its ability to finance deficits is limited by domestic saving. A closed economy cannot in aggregate live beyond its means because every dollar borrowed and spent by government must be offset by another dollar saved and not spent by creditors. Only an economy open to foreign trade and international capital flows can live beyond its means for extended periods. It is no coincidence that Reaganomics coincided with the internationalization of the capital market. Of course, President Reagan's strong leadership and affinity to the discredited Laffer Curve also contributed. Divided government -- a Democratic Congress and Republican President -- made matters worse by reducing accountability. Each side could blame the other.

The foregoing sections provided some insights into restoring fiscal responsibility. First, the problem is not lack of knowledge: The prescription for sound fiscal policy is straightforward. Second, the magnitude of the federal deficit is elusive but estimates need not be exact to improve policy. Third, the economic shock of reducing the deficit is not overwhelming: A borrow-and-spend policy takes about as much out of the economy as it puts in whether the debt is rising or falling. Fourth, the issue is not our low propensity to save: A country with low savings does not have to live beyond its means although it is tempted to do so because low savings contribute to low investment and slow economic growth. Fifth, the issue is not claims on federal largess: Interest groups always have and always will ask; the key to successful policy is a government that can say no. The following paragraphs especially address the issue of why the federal government has been unable to say no to claims on its generosity and what institutional changes are necessary for it to say no.

[15]Some studies indicate that a 2-3% inflation rate aids the economy by creating price and wage flexibility. Hence, annual money supply increasing at 5% is acceptable.

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Past Institutional Reform

Legislation has been easier to enact than to apply with success to bridle government deficits. The Congressional Budget and Impoundment Control Act of 1974 was an early attempt at budget responsibility by Congress. The Act established procedures to set overall receipts, expenditures, and division of outlays in a Concurrent Budget Resolution to be passed by Congress early in the year (May 15). Proposed legislation from committees and subcommittees were to conform to the guidelines. The Act instituted a more rational budget process than the previous piecemeal approach but did not bring fiscal responsibility to Congress. One reason is because it cost the President a form of the line item veto -- the ability to impound (not spend) funds authorized by law to be spent.

The Gramm-Rudman-Hollings Act (GRH), officially the Balanced Budget and Emergency Deficit Control Act of 1985, called for a balanced budget by FY 1993. GRH was replaced by the Omnibus Budget Reconciliation Act (OBRA) adopted in late 1990 after a budget summit between the Administration and Congressional leaders. OBRA was designed to reduce 1991-95 deficits by nearly $500 billion.

A notable section of OBRA, the Budget Enforcement Act (BEA), established procedures to discipline government fiscal policy so as to balance the federal budget in five years. One provision of BEA set *discretionary spending caps* on (1) defense, (2) international, and (3) domestic programs from 1991 through 1993. Each of the three categories has a cap and a "firewall" to prevent the government from using savings from one category (e.g. defense) to compensate for new spending on another category. By 1994 and 1995, the three categories were to be allowed to compete for combined spending under a single dollar ceiling below that in 1993.

A second provision, a *pay-as-you-go rule*, specified that, in aggregate, mandatory spending such as Medicare and unemployment compensation not add to the deficit. Any change in provisions raising expenditures would have to be accompanied by a tax increase.

With few exceptions such as declared emergencies for the Los Angeles riot, Chicago flood, and Florida hurricane, the government adhered to OBRA. Large budget deficits persist mainly because planners anticipated neither the 1990 recession which reduced government revenue nor the massive increases in outlays for Medicare and Medicaid health programs.

President Clinton's economic program replaces OBRA and also is designed to reduce the deficit to sustainable levels. But it is as much a major reordering of tax and spending priorities as an effort at fiscal restraint. The ambitious social agenda pursued by the Administration could enlarge deficits by 1996 and beyond. The string of failed legislative efforts at fiscal responsibility are manifestations of fundamental, systemic root causes underlying the nation's commitment to live beyond its means.

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Decline of Encompassing Institutions

The loss of federal fiscal control is explained mainly by the decline of encompassing institutions. The major encompassing institutions are the Presidency, political parties, and congressional leadership including committee chairpersons.[16] Encompassing institutions tend to view legislation from the perspective of the long term and the nation at large -- the public interest. Other institutions view legislation from the standpoint of the short term and special interests -- the local district of a Congressman, the political action committee (PAC) which supplies funds for a specific group and purpose, or any other special interest which provides benefits to the decision maker. Encompassing institutions are accountable to the public at large and are responsive to nationwide popular opinion. Encompassing institutions are part of the representative political process, filtering populism through in-depth analysis so as to anticipate and avoid undesirable (1) unintended consequences, (2) interactions, (3) long-term impacts, and (4) macro-micro inconsistencies.

Any well-functioning democracy must maintain a balance between encompassing institutions concerned about the nation's welfare and nonencompassing institutions ensuring that legislation is tailored to legitimate local needs and circumstances. Excessive dominance by encompassing interests is manifest in overlooked local needs and injustices to small groups. When nonencompassing institutions predominate, the *fallacy of composition* or *micro-macro inconsistency* dominates. That is, legislation responding favorably to each special interest group separately is damaging to the public interest and to long-term well-being of the nation.

The most serious institutional failure is the decline of the political party. The party, an inherently encompassing institution, had long-term perspective and had a major stake in a candidate whose good governance would build a favorable nationwide party image so that the party could prosper and place more persons in office in the long run. Parties dominated the nomination process and supplied campaign funds to candidates. Local party organizers assured an audience on the campaign circuit. But interest group funding has replaced party funding, television has replaced the local party organizer, and conventional delegates bound to local-issue primary election results have replaced party professionals. Who will screen out a candidate willing to sacrifice the distant interests of children and grandchildren to finance generous programs for today?

The presidency remains the most powerful of encompassing institutions among elected offices but has lost some of its force to serve the public interest even as it has gained overall power by virtue of technocratic expertise in the executive branch. The reasons for the decline are many. In former times, the President was nominated by and his campaign was

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[16] Much of this section is from Tweeten (1989, ch. 3).

financed by the party. He could not campaign everywhere and so had to depend on the party faithful to work for him in every section of the country. Now, television reaches every section of the country, reducing the need for local organization. Celebrity status and telegenic personality rank well above party loyalty or statesmanship as qualifications for a successful candidate.

The President can take office obligated to no one with the long-term public interest at heart. Thus, the President's policies tend to reflect the special interests which got him elected and his own short-run perspective -- at most eight years rather than the indefinitely long horizon of the party. He can pursue a profligate fiscal policy of the nation living beyond its means until credit runs out (after he leaves office), leaving a burdensome legacy of debt for future generations.

The situation in Congress is similar except that Congress is inherently nonencompassing. That is, it makes sense for a congressman to aggrandize his constituency knowing that his district will pay only 1/435 = .2 percent of the cost (assuming his district is of average size and wealth). Incentives facing a Senator are only slightly more in the public interest.

In former times, party discipline helped to ensure that private greed did not bring national fiscal ruin for which the party and its congressional leadership would be held accountable. But Congress today is all but unable to serve the long-term public interest or even legitimate private interests in the face of the rise of single issue interests and television, with decline in the power of congressional leadership, with a sharp rise in congressional staff numbers (good contacts for ubiquitous lobbyists), and with proliferation of subcommittees easily commandeered by special interests who are likely to find members of Congress responsive to their causes.

Fiscal responsibility can be restored by shifting the balance of political power towards encompassing institutions. Some suggestions include:

1. Greater funding of elections by the public rather than by special interest groups, and a greater portion of funds provided to parties which in turn will allocate funds to candidates. Free media, especially in-depth television coverage on substantive issues, can help. Changes in election laws could go farther to lower political contributions to individual candidates relative to contributions to parties. Contributions to individual campaigns but not to parties would be limited. Many of President Clinton's reforms proposed in 1993 make sense but numerous other, more important changes are necessary as noted below.

2. Strengthen professional expertise of staffs of the Congressional Budget Office, General Accounting Office, Office of Technology Assessment, Library of Congress (Legislative Reference Service), and congressional committees. However, a danger is that these agencies will serve parochial interests favored by Congress. Because technocratic expertise is a major source of power, the encompassing executive branch

of government must have the greatest expertise to analyze and help manage programs.

3. Tighten party discipline and leadership influence in Congress. Sharply reduce the number of subcommittees.

4. Use term limits to reduce opportunities for pork barrel and privilege attending seniority, and to reduce incentives for trading special favors for a campaign "war chest." Incumbency has become America's hereditary aristocracy as seniority-laden members of Congress return term after term to reward the special interests and constituents who got them reelected. Members of Congress get reelected by channeling pork barrel projects to their districts rather than by serving the broad public interest. This phenomenon is manifest in polls showing that constituents strongly support their representatives but strongly criticize Congress as a group.

5. Divide states into four groups at random and hold primary elections in each group one month apart. The intent would be to have each grouping represent a cross section of interests so that a candidate would have to appeal to broad interests rather than to special interests to obtain the nomination.

6. Carefully scrutinize so called off-budget items; where appropriate place them within the federal budget.

7. Provide the President the line-item veto.

8. Amend the Constitution to require a balanced budget. A 60% majority would be required for legislation to run deficits above those arising from automatic stabilizers during recession. More than a simple majority is called for to overcome the past bias toward government failure apparent in persistent deficits.

A balanced budget amendment is a drastic response indeed to fiscal irresponsibility in government.[17] Cluttering the constitution with an essentially procedural matter is a deplorable way to restore fiscal discipline to government. Nothing else has worked, however.

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[17]In 1992, the House failed by only 9 votes from approving a balanced budget amendment by the necessary two-thirds majority. Had the amendment been successful in the House and Senate and signed by the President, it would have required a balanced budget two years after being ratified by three-fourths of the states. The amendment did not specify what steps must be taken to move toward a balanced budget. It did allow for budget deficits approved by 60% of the members of Congress, a useful safeguard to be able to use fiscal policy in recessions.

Some contend a solution is to divide the government budget into current and capital accounts. That solution has fatal drawbacks.[18] Creation of a separate capital account for deficit spending (while the current account is balanced) would create an attractive nuisance inviting abuse. All manner of spending would be classified as an *investment* in the future and thrown into a capital account always in deficit. In the United States, capital investments are so numerous that outlays for them and receipts from them pretty well balance from year to year. The law of large numbers allows capital investments made by the federal government to be on a pay-as-you-go basis in the current account.[19]

Some populists contend that the answer is for the government to simply repudiate its debt. Many such advocates believe creditors serve no useful purpose. Creditors forego consumption and alternative investments to finance public debt and hence deserve compensation. Repudiating debt or inflating it away by creating money would destroy confidence in government and would threaten existence of the world financial community. It is an unthinkable option.

CONCLUSIONS

This report emphasizes reforms necessary for the government to say no to deficit spending. This focus on government rather than the economy as the source of the problem contrasts with claims by other economists that the problem is inadequate savings, trade barriers by Japan and other countries, too little taxation, or too much spending.

This report could have but did not focus on specific tax and spending changes. For example, introducing a value added tax, reducing payroll taxes, and removing the corporate income tax could encourage saving and investment; indexing capital gains, limiting home mortgage income tax deductions, and extending the school year to 10 months could raise investments in human and material productive capital. Raising gasoline taxes by at least 50 cents per gallon could reduce traffic congestion and dependence on foreign oil while encouraging energy efficiency and protection of the environment. Expanded apprenticeship programs, a wage supplement, or enlarged earned income credit could help disadvantaged workers escape poverty. All retirement programs (including Social Security) could be converted to actuarially sound vested investment plans to increase savings. The list could go on but is controversial and hence would require years to pass and implement. Thus the focus must first be on fiscal responsibility.

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[18] The government has a pernicious tendency to *underestimate* the full-employment rate and hence to incur deficits even in a full-employment economy.

[19] If the defense buildup of the Reagan years was in fact a capital outlay bringing lower defense costs with the end of the Cold War, the federal budget now should be in surplus to pay off that capital investment. Additional capital spending then could be justified to offset the dividend surplus. Such sophistry would constitute an endless debate. The better option is to require a balanced budget.

The adjustment to a sound economy will be difficult but not impossible. The reason is because the deficit is mostly a transfer payment. Increased government spending and reduced taxes have been financed by borrowing. Every dollar added to the economy through government deficit spending has been offset by a dollar removed from creditors' spending for consumption or investment. Similarly, one less dollar of government deficit spending will leave another dollar in the hands of creditors to spend on consumption or investment. Hence presence or absence of deficits kept within reasonable bounds and financed by borrowing does not have a decisive influence on aggregate demand. Foreign-held debt behaves differently because repayments are less likely to be spent in the U.S. and hence to sustain aggregate demand.

The principal cause of federal fiscal incontinence has been the decline of encompassing institutions such as political parties. To restore discipline, these institutions must be strengthened.

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